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| APPLICATION NO. | FILING DATE | FIRST NAMED INVENTOR | ATTORNEY DOCKET NO. | CONFIRMATION NO. |
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| 09/753,513 | 01/03/2001 | Michael Mesh | S0489/7010 GSE | 3166 |
| 23338 | 7590 | 06/20/2006 | EXAMINER | |
| DENNISON, SCHULTZ & MACDONALD 1727 KING STREET SUITE 105 ALEXANDRIA, VA 22314 | | | WONG, BLANCHE | |
| | | | ART UNIT | PAPER NUMBER |
| | | | 2616 | |

DATE MAILED: 06/20/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

| | | | |
|------------------------------|------------------------|---------------------|--|
| Office Action Summary | Application No. | Applicant(s) | |
| | 09/753,513 | MESH ET AL. | |
| | Examiner | Art Unit | |
| | Blanche Wong | 2616 | |

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) Responsive to communication(s) filed on 17 April 2006.
- 2a) This action is FINAL. 2b) This action is non-final.
- 3) Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) Claim(s) 1-19 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) Claim(s) 4 and 10-13 is/are allowed.
- 6) Claim(s) 1-3,5-9,16,18 and 19 is/are rejected.
- 7) Claim(s) 12-15 and 17 is/are objected to.
- 8) Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) The specification is objected to by the Examiner.
- 10) The drawing(s) filed on 12 August 2005 is/are: a) accepted or b) objected to by the Examiner.
 Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
 Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) All b) Some * c) None of:
 1. Certified copies of the priority documents have been received.
 2. Certified copies of the priority documents have been received in Application No. _____.
 3. Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) Notice of References Cited (PTO-892)
- 2) Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
 Paper No(s)/Mail Date _____.
- 4) Interview Summary (PTO-413)
 Paper No(s)/Mail Date. _____.
- 5) Notice of Informal Patent Application (PTO-152)
- 6) Other: _____.

DETAILED ACTION

Response to Arguments

1. Applicant's arguments with respect to claims 1-19 have been considered but are moot in view of the new ground(s) of rejection.
2. Examiner notes that claim 13 is identical in claim interpretation as claim 12.

Drawings

3. The drawings are objected to under 37 CFR 1.83(a). The drawings must show every feature of the invention specified in the claims. Therefore, the multiplexer and the demultiplexer (both in claim 3)(it is Examiner's position that the aggregator is 100 and service aggregation modules are 118,120,122 with in aggregator; see also Fig. 5) must be shown or the feature(s) canceled from the claim(s). No new matter should be entered.

Claim Objections

4. Claim 12 is objected to because of the following informalities: "said optical transceivers" in line 4 should be replaced with – said optical transceivers --; and "optical transceivers" in line 5 should be replaced with – said optical transceivers --. Appropriate correction is required.
5. Claim 13 is objected to because of the following informalities: "optical transceivers" in line 5 should be replaced with – the optical transceivers --. Appropriate correction is required.

6. Claim 14 is objected to because of the following informalities: “said aggregator unit” in line 2 should be replaced with –said aggregator—; “a service aggregation module” in line 10 should be replaced with –the service aggregation module – or – said service aggregation module – as in claim 1, line 17; and “said aggregation module” in line 11 should be replaced with – said service aggregation module --. Appropriate correction is required.

7. Claim 18 is objected to because of the following informalities: “a sorting module” in line 24 should be replace with – the sorting module – as in line 15; “a service collection unit’s transceiver” in line 31 should be replaced with – a service collection unit’s optical transceiver --. Appropriate correction is required.

Claim Rejections - 35 USC § 112

8. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

9. **Claims 5-9,16,18-19** are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

With regard to claim 18, it is unclear whether “a processing module” in line 36 is the same as the one in line 6.

10. There is insufficient antecedent basis for this limitation in the claims:

Claim 5 recites the limitation “the service collection unit’s optical transceiver” in line 2.

Claim 6 recites the limitation “said tagging module” in line 2.

Claim 7 recites the limitation “said Trunk” in line 2 and “said tagged packets” in lines 2-3.

Claim 8 recites the limitation “the packet switch” and “the service collection unit’s optical transceivers” in lines 2-3.

Claim 16 recites the limitation “the service collection unit’s optical transceiver” in line 2.

Claim 19 recites the limitation “said packet processing module” in line 2.

Claim Rejections - 35 USC § 102

11. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

12. **Claims 1-3** are rejected under 35 U.S.C. 102(e) as being clearly anticipated by Tiernan et al. (U.S. Pat No. 6,172,988).

With regard to claim 1, Tienan discloses (in Fig. 1)

at least one service collection unit (**encoder 12, col. 5, line 58**) including

a collection module (**PES Packetizer 14, col. 5, line 67-col. 6, line 1**) for collecting a plurality of services data (**elementary streams 24, col. 5, line 62; video, audio or other coded bitstream as an “elementary stream, col. 1, line 35-36**) to be transmitted;

a processing module (**PES Packetizer**) for processing the services data in their original protocols into packets; and

a packet transmission module (**MUX 16, col. 6, line 1**) for converting the packets into optical signals on an optical fiber (**fiber optic link, col. 5, line 61**) for transmission into a metro network; and

an aggregator (**decoder 18, col. 5, line 59**), coupled for upstream and downstream optical communication to a plurality of said service collection units, and including:

a sorting module (**DE/MUX 20, col. 6, line 6**) for sorting the services data from a plurality of packets received from said metro network, according to service type; and

a service aggregation module (**PES De-Packetizer 22, col. 6, line 8**) for combining like services data for transmission over an appropriate service network.

With regard to claim 2, Tienan further discloses a packet transmission module that includes a packet switch (**MUX 16, col. 6, line 1**) for switching the packets of like services data onto an optical fiber (**fiber optic link, col. 5, line 61**) in an appropriate network.

With regard to claim 3, Tienan further discloses a service aggregation module that includes a multiplexer (**MUX 16, col. 6, line 1**) and a demultiplexer (**DE/MUX**

20, col. 6, line 6) for multiplexing/demultiplexing like services data onto an optical fiber (**fiber optic link, col. 5, line 61**) in an appropriate network.

Claim Rejections - 35 USC § 103

13. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

14. **Claim 5** is rejected under 35 U.S.C. 103(a) as being unpatentable over Tienan as applied to claims 1-3 above, and further in view of Farhan (U.S. Pat No. 6,356,369).

With regard to claim 5, Tienan discloses the system according to claim 3.

However, Tienan fails to explicitly show a service collection unit's optical transceiver that includes at least one wavelength specific laser, and further includes a wavelength division multiplexer/demultiplexer (WDM) for multiplexing/demultiplexing the number of optical transceivers with different optical signals having different wavelengths onto/from a single optical fiber.

In an analogous art, Farhan discloses an optical transceiver (**digital optical transmitter 305 in Fig. 3, col. 4, line 30**) that includes at least one wavelength specific laser (**optical transceiver 320 comprising a laser diode, col. 4, line 67-col. 5, line 1; see also Fig. 3**), and further includes a wavelength division multiplexer/demultiplexer (WDM) (**multiplexer/demultiplexer 325, col. 5, line 6**) for multiplexing/demultiplexing the number of optical transceivers with different optical signals having different

wavelengths onto/from a single optical fiber (**a fiber optic communication channel, col. 5, line 8**).

At the time of the invention, it would have been obvious to a person of ordinary skill in the art to include an optical transceiver that includes at least one wavelength specific laser, and further includes a wavelength division multiplexer/demultiplexer (WDM) for multiplexing/demultiplexing the number of optical transceivers with different optical signals having different wavelengths onto/from a single optical fiber in Tienan's system. The suggestion/motivation for doing so would have been to enable fiber optic communication. Farhan, col. 5, line 8. Therefore, it would have been obvious to combine Farhan with Tienan for the benefit of include an optical transceiver that includes at least one wavelength specific laser, and further includes a wavelength division multiplexer/demultiplexer (WDM) for multiplexing/demultiplexing the number of optical transceivers with different optical signals having different wavelengths onto/from a single optical fiber in order to enable fiber optic communication, to obtain the invention as specified in claim 5.

15. **Claim 6** is rejected under 35 U.S.C. 103(a) as being unpatentable over Tienan as applied to claims 1-3 above, and further in view of Jasen et al. (Pub. No. US2002/0019879 A1).

With regard to claim 6, Tienan discloses the system according to claim 3. However, Tienan fails to explicitly show a tagging module that is a MPLS tagging module for adding a tag based on MPLS to each of the packets.

In an analogous art, Jasen discloses adding a tag based on MPLS to each of the packets (... **tagging network traffic messages or packets ... MPLS, para. 0029**]).

At the time of the invention, it would have been obvious to a person of ordinary skill in the art to include adding a tag based on MPLS to each of the packets in Tienan's system. The suggestion/motivation for doing so would have been to provide for QoS. Jasen, para. [0029]. Therefore, it would have been obvious to combine Jasen with Tienan for the benefit of adding a tag based on MPLS to each of the packets in order to provide for QoS, to obtain the invention as specified in claim 6.

16. **Claims 7 and 9 are rejected under 35 U.S.C. 103(a) as being unpatentable over Tienan as applied to claim 1 above, and further in view of Ho (Pub No. US2002/0136223).**

With regard to claim 7, Tienan discloses the system according to claim 3. However, Tienan fails to explicitly show a module in a trunk for encapsulating tagged packets into PPP packets.

In an analogous art, Ho discloses encapsulating tagged packets into PPP packets (...**encapsulation protocol such as PPP ... MPLS/PPP ..., para. 0007**]).

At the time of the invention, it would have been obvious to a person of ordinary skill in the art to include encapsulating tagged packets into PPP packets in Tienan's system. The suggestion/motivation for doing so would have been to eliminate the overhead associated with padding and potentially reducing the ATM header overhead. Ho, para. [0007]. Therefore, it would have been obvious to combine Ho with Tienan for the benefit of encapsulating tagged packets into PPP packets in order to eliminate the

overhead associated with padding and potentially reducing the ATM header overhead, to obtain the invention as specified in claim 7.

With regard to claim 9, Tienan discloses a system according to claim 7.

However, Tienan fails to explicitly show PPP packets that are arranged in an HDLC-like frame.

At the time of the invention, it would have been obvious to a person of ordinary skill in the art to include PPP packets that are arranged in an HDLC-like frame in Tienan's system. The suggestion/motivation for doing so would have been to provide for PPP. (**It is Examiner's position that PPP is a layer two protocol that is built on top of a restrictive subset of the standard HDLC protocol.**) Therefore, it would have been obvious to combine Ho with Tienan for the benefit of PPP packets that are arranged in an HDLC-like frame in order to provide for PPP, to obtain the invention as specified in claim 9.

Allowable Subject Matter

17. **Claims 4,10-13** are allowed.
18. Claims 14,15,17 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.
19. Claim 8,16 would be allowable if rewritten to overcome the rejection(s) under 35 U.S.C. 112, 2nd paragraph, set forth in this Office action and to include all of the limitations of the base claim and any intervening claims.

20. Claims 18-19 would be allowable if rewritten or amended to overcome the rejection(s) under 35 U.S.C. 112, 2nd paragraph, set forth in this Office action.

Double Patenting

1. The nonstatutory double patenting rejection is based on a judicially created doctrine grounded in public policy (a policy reflected in the statute) so as to prevent the unjustified or improper timewise extension of the "right to exclude" granted by a patent and to prevent possible harassment by multiple assignees. See *In re Goodman*, 11 F.3d 1046, 29 USPQ2d 2010 (Fed. Cir. 1993); *In re Longi*, 759 F.2d 887, 225 USPQ 645 (Fed. Cir. 1985); *In re Van Ornum*, 686 F.2d 937, 214 USPQ 761 (CCPA 1982); *In re Vogel*, 422 F.2d 438, 164 USPQ 619 (CCPA 1970); and, *In re Thorington*, 418 F.2d 528, 163 USPQ 644 (CCPA 1969).

A timely filed terminal disclaimer in compliance with 37 CFR 1.321(c) may be used to overcome an actual or provisional rejection based on a nonstatutory double patenting ground provided the conflicting application or patent is shown to be commonly owned with this application. See 37 CFR 1.130(b).

Effective January 1, 1994, a registered attorney or agent of record may sign a terminal disclaimer. A terminal disclaimer signed by the assignee must fully comply with 37 CFR 3.73(b).

2. Claim 1 provisionally rejected under the judicially created doctrine of obviousness-type double patenting as being unpatentable over claim 1 of copending Application No. 09/753399. Although the conflicting claims are not identical, they are not patentably distinct from each other.

09/753399 discloses a method for data transmission over an optical network that performs the functions of a service collection unit and an aggregator, namely "collecting, in at least one service collection unit, ... processing ... into packets, converting packets into optical signals ... sorting ... in at least one aggregator module, ...".

The current application shows similarly.

09/753513 discloses a system for data transmission over an optical network with "at least one service collection unit including a collection module for collecting ... a

processing module for processing ... into packets; and a packet transmission module for converting the packets into optical signals ...; and an aggregator ... including: a sorting module for sorting ...".

At the time of the invention, it would have been obvious to a person of ordinary skill in the art to observe the similarities between 09/753399 and 09/753513. The suggestion/motivation for doing so would have been to provide for implementation of a method. Therefore, it would have been obvious to have a system claim for the benefit of implementation.

This is a provisional obviousness-type double patenting rejection because the conflicting claims have not in fact been patented.

Conclusion

21. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Blanche Wong whose telephone number is 571-272-3177. The examiner can normally be reached on Monday through Friday, 830am to 530pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Huy Vu can be reached on 571-272-3155. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

Rw

BW
May 31, 2006



HUY D. VU
SUPERVISORY PATENT EXAMINER
TECHNOLOGY CENTER 2600